

Statement of C. Mark Dunning on
Revisions to the Economic and Environmental Principles and Guidelines for
Water and Related Land Resources Implementation Studies

I am pleased to provide a number of suggestions regarding revision of the the Economic and Environmental Principles and Guidelines (P&G) for Water and Related Land Resources Implementation Studies. My suggestions are made on the basis of a 30+ year career with the Army Corps of Engineers as field-level planner; as a Division Director at the Institute for Water Resources; and, as the Chief of Future Directions in the Civil Works Directorate with responsibilities for implementing the Corps Civil Works Strategic Plan. Since my retirement from the Corps in 2004, I have been involved with water resources topics on a broad scale with Marstel-Day consultants, Fredericksburg, VA where I am its Director of Water Resources Studies.

My suggestions follow:

Suggestion 1: I recommend that broad principles of modern water-resources planning be clearly stated in the revised P&G and that these principles shape the further development of the analytic guidelines.

The revision of P&G should be approached in the context of the body of thinking about restructuring water resources planning that has emerged at least since the 1999 National Research Council's report *New Directions in Water Resources: Planning for the U.S. Army Corps of Engineers*, and most recently in the 2007 National Academy of Public Administration study *Prioritizing America's Water Resources Investments: Budget Reform for Civil Works Construction Projects at the U.S. Army Corps of Engineers*. This latter study concluded when considering P&G: "... the Panel is concerned that the P&G, while arguably flexible, is far from the positive driver it should be. It still emphasizes economics over risk, the environment, and other important goals; it is dated in terms of analytical methods; it fails to recognize evolving legislative and social realities; it does not emphasize performance measurement; it does not facilitate working with other agencies; and it does not provide guidance to drive the Corps to integrated watershed planning" (p. 123). The revision of P&G is an opportunity to affirm a number of broad principles of contemporary water-resources planning and management. For example the following principles that are largely contained in the Corps' CW strategic plan are suggestive of such a direction (additional work and thinking should elaborate and expand upon them):

- *Desired end state for federally funded water resources investments:* balanced, sustainable, multi-objective, systems-oriented, watershed based solutions.
- *Key principles for decisions:* use of market forces, cost recovery, decentralized decision making involving public-private cooperation and all levels of government, data and information rich environments, focus on results.
- *Federal roles:* facilitator, technical resources provider, promoter of collaborative problem solving among all levels of government.

Suggestion 2: Eliminate National Economic Development (NED) as the sole Federal Objective and broaden the statement of objectives: "the *objectives of enhancing regional economic development; the quality of the total environment, including its protection and improvement; the well-being of the people of the United States; and the national economic development are the*

objectives to be included in federally financed water resources projects, and in the evaluation of benefits and costs attributable thereto, giving due consideration to the most feasible alternative means of accomplishing these objectives (Section 209, PL 91-611, U.S. Congress, 1970).

A water-resources planning process that is exclusively, or even essentially, focused on maximizing NED is increasingly out of step with the multi-faceted conception of well-being that modern, pluralistic societies embrace and it ignores a huge array of factors that should influence the degree to which water-resources solutions are judged as effective, complete, acceptable and equitable. Modern analytic techniques can deal with multi-objective trade-offs and can display them in ways that facilitate their consideration by stakeholders and decision makers. There are many decision-making frameworks used by other US government agencies (e.g. DoT) incorporating multi-dimensional factors, which when considered together, do not place the singular importance on the benefit – cost ratio that the current P&G creates. This reliance on benefit-cost calculations, to the detriment of these recognized, other factors, leads to decisions that are out of balance potentially with larger social accounts that deserve consideration in determining national investment priorities.

Suggestion 3: As part of the P&G revision, identify and propose fixes to the Water Resources Act of 1986 (WRDA 86), which inhibit the utilization of the broad principles of water-resources management recommended in Suggestion 1.

WRDA 86 fundamentally changed the water-resources development “rules of the game” by, first, instituting requirements for sharing the cost of water-resources development between the federal government and cost-sharing project sponsors and, second, requiring cost sharing of feasibility studies between the federal government and local project sponsors. The intent of the legislation was to discipline the project development process by instituting “user pay” principles. Most reviewers of the impact of WRDA 86 conclude that cost sharing has had this intended effect and has weeded out some projects that were not meritorious to local sponsors in light of an expectation of cost sharing. However, many of these reviewers have also concluded that WRDA 86 has had a number of unintended, negative consequences, including:

- The scope of water resources problems and opportunities being considered for resolution by the Corps has been unfortunately more restricted to conform to the interest of the study cost-sharing partners (National Research Council, *U.S. Army Corps of Engineers Water Resources Planning: A New Opportunity for Service* (2004), p. 82); and

- The promotion of single-purpose projects, developed on a project-by-project, piecemeal basis and the concomitant reduction of interest in broader-scale, integrated, water-resources management approaches with more comprehensive solutions at regional or basin scales (National Research Council, *River Basins and Coastal Systems: Planning within the U.S. Army Corps of Engineers* (2004), p.4; National Research Council, *New Directions in Planning* (previously cited) (1999, p. 5).¹

¹ LTG Robert Flowers, the Chief of Engineers summarized this point of view in his testimony before the Senate Committee on Environment and Public Works in 2002: “Right now, existing laws and policies drive us to single focus, geographically limited projects where we have sponsors sharing in the cost of the study. The current approach narrows our ability to look comprehensively and sets up inter-basin disputes. It also leads to projects that solve one problem but may inadvertently create others. Frequently we are choosing the economic solution over the environmental, when we can actually have both. I believe the future is to look at watersheds first; then design projects consistent with the more comprehensive approach.” (Quoted in National Research Council, *River Basins and Coastal Systems* (2004), p. 117.)

Suggestion 4: Rename the “Other Social Effects (OSE) Account” the “Human Dimensions (HD) Account” and give this account the broader purpose it deserves in problem identification, project formulation and evaluation, and project selection processes.

The current P&G essentially treats the OSE account as a residual category, noting that it is a means of displaying and integrating into water-resources planning those effects that are not reflected in the other three P&G accounts (P&G, section 1.7.5). Far from being a residual category, this account should describe how constituents of life that influence personal and group definitions of satisfaction, well-being and happiness such as social connectedness, equality, community resiliency and vulnerability, and public health and safety considerations are affected by water-resources issues and the ways those issues could be addressed. P&G guidance needs to be much more forceful in emphasizing the positive role that such information should have in forming planning objectives, developing alternatives, and in helping to crystallize the socioeconomic implications of alternatives. Currently, while the P&G does not preclude this more robust and useful role, it certainly does nothing to promote it either; and, the powerful effect of the focus on NED in the current document often trumps truly significant OSE factors. The broader role for social effects factors has been more fully articulated in the Corps white paper which I co-authored: *Theoretical Underpinnings of the Other Social Effects Account* (ERDC, 1692 CHL SR-07-1, 2007 <http://www.stormingmedia.us/37/3771/A377174.html>). Changing the name of the OSE account to the Human Dimensions (HD) account is intended to provide a “fresh start” for this important area and to employ the designation for social effects used by many other federal agencies (see www.HD.gov).

In conclusion, I recognize that much more, detailed, analytic heavy lifting will be needed to fully develop these and the many other suggestions that will be received for bringing Federal water-resources planning guidance to the appropriate complexity and holistic approach that would strengthen and improve water-resources decision making. I wish you good luck and best wishes as you embark on this very important undertaking and would be pleased to elaborate on these suggestions further if you would find it beneficial.

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